

In the News...

**George L. Winfield
Appointed to
Authority Board**

Governor Parris N. Glendening has appointed George L. Winfield, director of Public Works for Baltimore City, to the Authority's board of member representatives. He will represent Baltimore City on the eight-member board. Mr. Winfield has more than 25 years of public works experience with the City of Baltimore.

Mr. Winfield began his career in 1973 as an engineer with the Baltimore City Department of Public Works. In 1984 he became chief of the Solid Waste Collection Division, responsible for collecting solid waste from 233,000 households. Two years later, he was appointed to head the Bureau of Solid Waste. In addition to many other accomplishments, Mr. Winfield initiated



George L. Winfield

weekly mechanical sweeping of major thoroughfares and neighborhood streets in the city.

From 1990 to 1995, Mr. Winfield served as interim bureau chief for the Bureau of General Services. During this time Mr. Winfield introduced alternative fuel vehicles into the fleet he managed as coordinator for the Clean Cities Program. He also was responsible for the construction and rehabilitation of many city schools and other facilities throughout the city.

More recently, Mr. Winfield served as deputy director of the Baltimore City Department of Public Works where he was responsible for four bureaus: Water and Waste Water, General Services, Transportation and Solid Waste. In January he was appointed Director of the Department of Public Works.

Mr. Winfield has a bachelor's degree in civil engineering and a master's degree in bio-environmental engineering from Howard University.



The Authority recently released its audited financial statements for fiscal year 2000. With that report, the Authority celebrates its 20th Anniversary. A summary of the past year's accomplishments, along with some reflections on the past 20 years in waste management, was included in the Annual Report. The summary, prepared by Executive Director Robin Davidov, appears here. Ms. Davidov participated first-hand in much of the progress the Authority and the waste management industry has experienced. In a separate interview, she offers her views on how the business of managing waste has changed and improved during the last two decades.

**Authority Celebrates
20th Anniversary
With Release of**

By Robin Davidov

Twenty years ago the Northeast Maryland Waste Disposal Authority was created by the Maryland General Assembly. Our mission was to develop and finance regional waste management projects that would address the region's growing waste disposal needs. Three major considerations were to underscore every project and program: financial viability, environmental safety and technological sophistication.

As we celebrate our 20th anniversary, I am pleased to report that we have surpassed our goals and remain on target, with all three major considerations an integral part of every Authority project. During the past two decades we have developed four award-winning facilities and have successfully integrated all methods of waste management including waste-to-energy, composting, and recycling and waste reduction. It's been an exciting two decades with many advances and changes in the waste management industry.

In early 1980, we began by planning and developing new facilities designed to more efficiently process the growing volumes of garbage that were being disposed of at the region's aging landfills. Since then, we have financed and built four major waste management facilities: the Southwest Resource Recovery Facility (BRESKO), the Harford Waste-to-Energy Facility, the Baltimore Composting Facility and the Montgomery County Resource Recovery Facility. We also have contracted for disposal of solid waste and animal remains. Additionally, we have developed regional and local recycling programs for our member jurisdictions. Combined, these projects have successfully diverted more than 1.3 million tons of waste from area landfills each year, preserving landfill space and significantly lessening the potential environmental impacts of burying waste.

Our projects have been highly successful and continue to set standards for the entire industry.

The Montgomery County Resource Recovery Facility has won many industry awards and is recognized throughout the world for its technological and environmental efficiency. BRESKO is undergoing a major

rates 20th Anniversary Annual Report

retrofit that will make it one of the cleanest operating facilities in the country. The retrofit will substantially reduce emissions and improve air and water quality in the region.

All of our member jurisdictions now have sophisticated residential and commercial recycling programs that have reduced the total amount of waste in the region by nearly 40 percent. The effort to boost recycling volumes has been significantly enhanced by increased access to the Internet. The Authority created a business-to-business website, www.mdrecycles.org, last year to help businesses start recycling programs. Visits to the site have been increasing and more businesses are learning how easy it is to recycle.

Now that methods of waste disposal have become more efficient, we have placed an increasing emphasis on maximizing renewable resources. Today, with our projects running efficiently and meeting all environmental standards, we are looking at new ways to reuse the byproducts of waste-to-energy, such as ash residue and recovered metals. These emerging technologies are paving the way for the future of waste management.

The Authority has been a pioneer in ash recycling. The American Ash Recycling (AAR) facility in York, Pennsylvania is processing ash residue from the Montgomery County Resource Recovery Facility and the Harford County Waste-to-Energy Facility. AAR recovers all ferrous and nonferrous metals (including coins), removes unburned combustible materials and turns the remaining ash into a uniform treated ash aggregate (TAA), which is used for road construction. With this process, nearly all of the ash residue sent to AAR from the Authority is being beneficially reused.

New economic opportunities have been created by deregulation of the electricity industry. As the marketplace for electricity begins to expand, electricity producers such as waste-to-energy facilities are looking for ways to distinguish their products. One of these ways is to provide electricity that is more environmentally friendly. Here's where we have an exciting advantage! Waste-to-energy facilities produce less sulfur

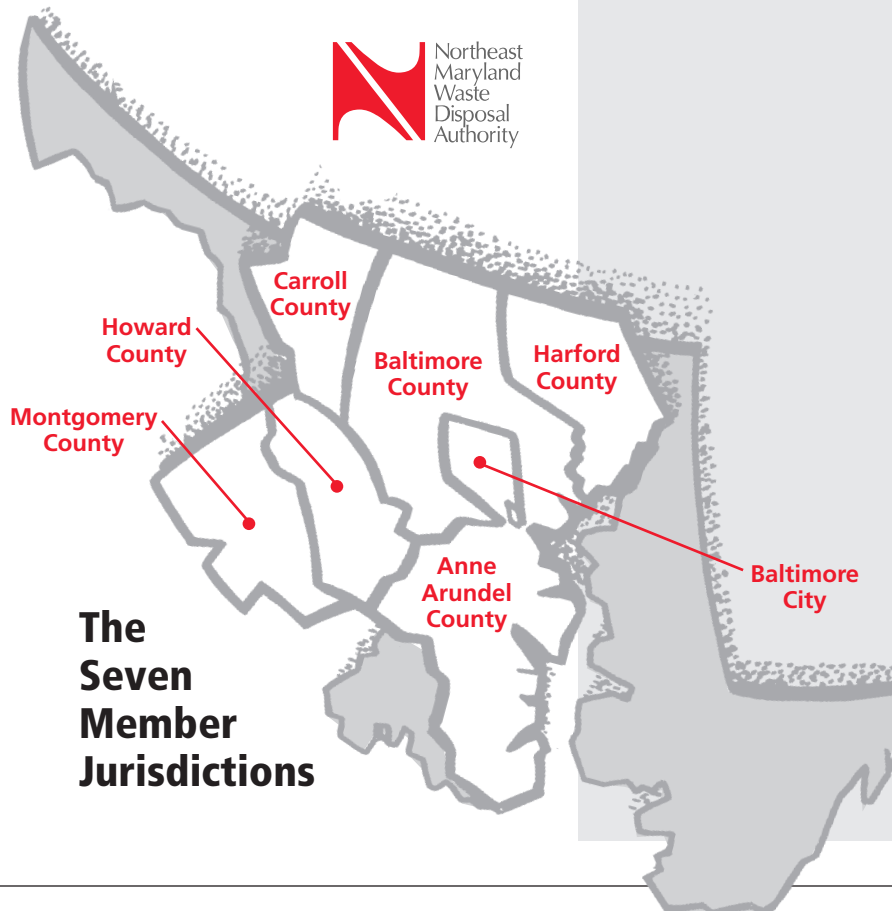
dioxide, which causes acid rain; fewer nitrogen oxides, which are precursors to ground level smog, and less particulate matter and dioxins per megawatt-hour than coal fired plants. This "clean power" choice will eventually bring in greater revenues to our waste-to-energy facilities and reduce the costs of waste disposal in the region.

All of our advances throughout the last 20 years have been made possible by the cooperation of seven member jurisdictions—Anne Arundel, Baltimore, Carroll, Harford, Howard and Montgomery Counties and Baltimore City. The members, through the Authority, combine their expertise and resources to solve waste management issues they once faced alone. Our member representatives remain committed to fostering a regional approach to waste management well into the 21st century.

For a copy of the Authority's Fiscal Year 2000 Audited Financial Statements, call the Authority at (410) 333-2730.



Robin Davidov
Executive Director of the
Northeast Maryland Waste
Disposal Authority



**The
Seven
Member
Jurisdictions**

interview: Robin Davidov, Executive Director of the Northeast Maryland Waste Disposal Authority

Editor: What has been the most significant development in waste management over the past 20 years?

Robin: The re-discovery of recycling is significant. Most people don't realize this, but between 1882 and 1902, the City of New York received revenues from vendors who sorted trash. The list of recycled material included rags, metal and paper (31 percent of the trash) as well as wood, glass, bagging, carpets, shoes, hats, rope, string (18 percent of the trash) and fat and bones. In 1904, 25 percent of the trash in Boston was picked out and marketed. But after WWII, cities began to drop regulations that required citizens to separate their trash, largely because home garbage disposals became so popular. Trash was sent to incinerators or dumped into the ocean. During the 1930's incinerators began to be replaced by a British invention, the sanitary landfill, a disposal method that did not require separation. As we know, Americans again began to separate their trash in the 1980's. Those items with market value, such as paper, some plastic containers, metal, and textiles, are now separately collected, sorted and marketed. Yard debris is also separately collected, processed and marketed. For those Americans with garbage disposals, a large portion of the organic waste is eventually recycled as treated sewage sludge.

Editor: How do you think our region measures up to other jurisdictions around the country in managing waste?

Robin: Well, I am obviously biased, but I believe that our region is quite progressive compared to other metropolitan areas around the country. When taking into account curbside recycling, tire recycling, yard debris recycling, turning waste into energy and the beneficial re-use of sewage sludge (organic wastes), we should be very proud of our accomplishments.

Editor: How has public perception of the many issues surrounding waste disposal changed during the last two decades?

Robin: I can tell you about the Westport neighborhood in Baltimore. Twenty years ago, the neighborhood was recovering from a very bad experience with a failed waste pyrolysis plant. To their credit, the neighborhood association carefully evaluated the Authority's proposal to replace the pyrolysis plant with a waste-to-energy facility. After studying European plants, they agreed to allow us to demolish the old plant and replace it with what is now the BRESKO facility. Not only has BRESKO exceeded all requirements for clean and environmentally safe operations, it has been a great corporate friend to the community, actively involved in two elementary schools, providing high school students with scholarships and financially supporting an adult literacy program. The neighborhood gave us their trust, and I believe they have been repaid many times over. Our Harford Waste-To-Energy facility provides scholarships and the Montgomery County Resource Recovery Facility also actively supports community projects. The Montgomery facility has gained national recognition for superior environmental performance.

Editor: Ten years ago, recycling was still a tough sell among both residential and business consumers. How has recycling's role in the waste management mix progressed?

Robin: Most residents in our region have access to curbside recycling, which makes it easy and convenient to recycle. We have more work to do in increasing the mix of products that can be recycled. For example, some jurisdictions are experimenting with adding textiles and aseptic packaging (juice boxes) to the mix. While large chain stores have sophisticated recycling programs in place, smaller businesses, office buildings and institutions often find the system complicated and confusing. The Authority's web site, www.mdrecycles.org has helped make navigating the system easier by putting waste generators directly in contact with recycling vendors who are willing to accept, process and market waste materials.

Editor: The environmental risks of waste disposal have always been a major concern for citizens and government regulators. How have those risks been addressed in the past 20 years?

Robin: Maryland has taken a leadership role in requiring that all landfills be lined and include leachate collection. Rubble landfills also will have to meet this safety requirement. Waste-to-energy facilities operate under the strictest requirements for air and water emissions, much stricter in fact, than comparable coal burning facilities. Trash is a local renewable fuel that is helping to meet the energy needs of thousands of households and businesses in our region.

After twenty years of testing, monitoring and evaluating our facilities, we can say with confidence that they all operate safely, cleanly and reliably.

Editor: Who ever thought that sewage sludge would become a sought-after commodity?

Robin: The public works departments in our region do an outstanding job of safely and economically managing sewage. To their credit, most of the resulting sludge (the solids part of sewage) is treated to reduce pathogens and then recycled onto farm fields. Baltimore City has taken the added step of further processing, through heating and composting, the sludge into consumer friendly soil and fertilizer. Moving sludge from a waste product to a sought after consumer product takes ingenuity, investment and hard work.

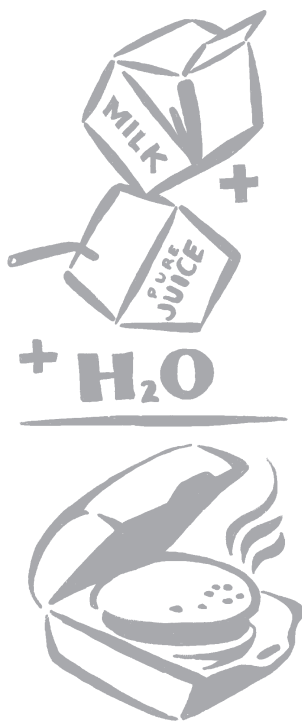
Editor: What do you see for the future of waste management locally and around the world?

Robin: I predict that as world energy prices increase and demand for electricity increases, waste will become more important as a renewable fuel. The EPA recently reassessed emissions levels from WTE facilities and found that modern WTE facilities are an insignificant source of pollution. I predict that 20 years from now landfill gas will be extracted as a fuel source. In 30 to 40 years landfills will be mined for recyclables and fuel. When the next generation digs up these old landfills, the trash will look very much the same as it did the day it was buried. Fortunately, due to recycling, waste prevention and waste fuel, there will be less of this legacy.

Closing the Loop

EarthShell— Designed for the Environment

By Clifton Dowling



The EarthShell Corporation, with headquarters in Annapolis Junction, Maryland, is an innovator of patented, environmentally preferable packaging for the food service industry. EarthShell has developed a new biodegradable, composite material that can be readily composted.

The new composite material is made from commonly available raw materials including limestone, starch, recycled natural fibers, functional coatings, manufacturing release agents and a thickener. Approximately 80 percent of the composite material is composed of abundant limestone and natural starch, a highly renewable resource.

Whenever possible, the composite material is made using reclaimed starch from the commercial processing of potatoes, including french fry trimmings. Recycled fiber, which is FDA-compliant and consists of post-consumer-waste, is used in the composite material instead of virgin fiber. Recycled school milk cartons and juice boxes are the source of the recycled fiber. Compared to producing traditional packaging, the EarthShell process uses less energy and results in lower greenhouse gas emissions. Instead of using volatile organic compounds such as pentane or butane as blowing agents, the EarthShell manufacturing process uses water.


The Sweetheart Cup Company in Owings Mills, Maryland is the first licensee to manufacture a commercial product from the new EarthShell material. The first customer for the new packaging is McDonalds. McDonalds is using the EarthShell composite material as an alternative to polystyrene in Big Mac sandwich containers. EarthShell containers have

been in daily use in 128 McDonalds stores since April. The entire U.S. McDonalds system will be provided with the containers, once the criteria for approval of an in-store validation program are met.

The U.S. Department of the Interior has been testing EarthShell plates and bowls for more than a year in the cafeteria of its headquarters in Washington. The pilot project began on Earth Day 1999 and was scheduled to run for six months. However, due to an overwhelming response from employees, the project is continuing. A second element of the pilot project involves testing the product's compostability at the U.S. Department of Agriculture's Beltsville, Maryland Agricultural Research Center. Three different composting methods have had very positive results. The USDA is now conducting plant growth tests with the compost mixture made from EarthShell products.

Future EarthShell applications include hinged-lid containers for hot and cold foods, plates, bowls, trays and eventually cups for hot and cold drinks.

EarthShell set a new industry standard in August of this year when it was awarded the first Green Seal certification for rigid food service packaging. The company had worked with Green Seal, a non-profit organization that sets product environmental standards, for more than two years to achieve the environmentally preferable product certification for its containers. Congratulations to the EarthShell Corporation for helping the environment while improving Maryland's economy!

You can visit the EarthShell website at www.EarthShell.com. 


Confronting the Challenge of Electronics Recycling

It is estimated that by the year 2002 more than 50 million computers will become obsolete in the United States annually. Technological advances have made day-to-day activities more convenient. But, the process of continually improving technology has produced an ever-growing stockpile of useless electronic equipment. Computers and other electronic products contain lead, mercury and other dangerous substances for which there are few options for disposal or recycling.

Howard and Montgomery Counties recently have taken proactive approaches to dealing with this growing disposal problem. In Howard County, the Alpha Ridge Landfill

Convenience Center for Recycling is collecting computers as part of a pilot collection program. Each month the county collects approximately 2.5 to 3 tons of computer material, which is picked up by a scrap recycling company.

In Montgomery County, a computer-recycling event was held at the Transfer Station on June 25. More than 3.5 tons of computer material was collected. Another computer-recycling event is scheduled for November 24.

For more information on where to send unwanted computers visit the Authority's recycling website, www.mdrecycles.org. 

RECYCLING ANNOUNCEMENT

The Montgomery County Public School System is collecting unwanted compact discs. Promotional CDs sent by internet carriers are welcome. Send disordered CDs to:

**The Taylor Science
Materials Center**
Thomas DuMars, Director
19501 White Ground Rd.
Boyd, Maryland 20841
301-353-0866



The Authority Welcomes Thomson and Fonner



Laura Thomson



Justin Fonner

The Authority recently appointed Laura Thomson as a project analyst and Justin Fonner as a project assistant.

Laura Thomson comes to the Authority with a diverse background in solid waste management. Her experience includes working as a residential marketing representative for BFI and serving as a marketing intern with the Monroe County Division of Solid Waste in New York. Ms. Thomson has spent the last three years working as a consultant with SCS Engineers. During that time, she acted as a territory manager for the EPA's Landfill Methane Outreach Program and participated in the development of several solid waste management plans.

Currently, Ms. Thomson is working toward her master's degree in environmental

science at Johns Hopkins. She received her bachelor's degree in marketing from the State University of New York at Oswego. In her spare time, Ms. Thomson enjoys hiking, spending time with her family, reading and traveling.

Justin Fonner received his bachelor's degree in earth-space science secondary education from Clarion University and his master's degree in geoenvironmental studies from Shippensburg University. As an intern for the Cumberland County Solid Waste Department in Pennsylvania, Mr. Fonner worked on many projects designed to improve the County's recycling rate. In his spare time, Mr. Fonner enjoys cooking, gardening, music, traveling and home-brewing.



WASTEWATCH

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WASTEWATCH

Serving Anne Arundel County, Baltimore City, Baltimore County,
Carroll County, Harford County, Howard County, and Montgomery County

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Successful integration of waste management

Award-Winning Facilities



Composting



Waste-to-Energy



Waste reduction



Recycling



Developing "clean power"

improving air and water quality

www.mdrecycles.org